

A METHOD AND APPARATUS FOR DIRECTORY-BASED COHERENCE  
WITH DISTRIBUTED DIRECTORY MANAGEMENT

5    ABSTRACT

          The present invention provides for a type of parallel  
processing architecture in which a plurality of processors  
has access to a shared memory hierarchy level. A memory  
hierarchy level has a coherence directory and associated  
10   directory data with a plurality of cachelines each  
associated with different data. Buffers are interconnected  
to processor memory and a plurality of processor elements,  
each element interconnected to different buffers. Cache  
lines are requested from memory, and the requests,  
15   responses, and detections therein are available for  
particular access modes, therein providing additional  
coherence of the data. Processing of the directory data is  
performed by processing elements.